

**REMARKS/ARGUMENTS**

Claims 16-29, 31, 32 and 34-38 are pending and were rejected. By virtue of this response, dependent claim 39 was added, and none of the pending claims have been cancelled or amended. Accordingly, claims 16-29, 31, 32 and 34-39 are currently under consideration.

With respect to all amendments and canceled claims, Applicant has not dedicated or abandoned any unclaimed subject matter and, moreover, has not acquiesced to any rejections and/or objections made by the Office. Applicant expressly reserves the right to pursue prosecution of any presently excluded claim embodiments in future continuations, continuations-in-part, and/or divisional applications. Also, in view of the new bases for claim rejection, Applicant withdraws all arguments and comments made in previous submissions to the Patent Office unless specifically referred to in this document.

**Double Patenting Rejection**

Claims 16-29 and 31-38 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 18-33 of copending Application Serial No. 10/563,171. Applicant notes that the rejection is provisional and that it is premature for Applicant to address the rejection at this time. The provisional obviousness-type double patenting rejection is based in comparing claims of a copending application to claims in the current application, and the basis for or arguments relating to obviousness-type double-patenting may change as claims are amended. Consequently, any arguments made in the present application or terminal disclaimer submitted prematurely may be mooted by claim amendments made in this or the copending application. Applicant will therefore address the rejection either by traverse or by submission of a terminal disclaimer as an administrative convenience upon an indication of allowance of claims in copending application serial no. 10/563,171.

**Claim Rejections under 35 U.S.C. § 103(a)**

**1. Independent claim 16 and dependent claims 19-23, 25, 29, 31, 32, and 34-38 rejected as obvious from Sick in view of Funger (section 5 of the Office Action)**

Claims 16, 19-23, 25, 29, 31, 32, and 34-38 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sick (U.S. Patent No. 4,820,033) in view of Funger (U.S. Patent No. 6,543,441). Applicant respectfully traverses.

The Office has the initial burden to provide a *prima facie* case of obviousness by explaining what structure in the cited references corresponds to the various components specified in Applicant's claims. The Office Action fails to do this for the claims and thus does not establish a *prima facie* argument of unpatentability. Further, the references when combined must provide sufficient information to render obvious the components of Applicant's claimed invention in the configuration specified in Applicant's claim. Sick in view of Funger does not render obvious a carrier and drive arrangement having components arranged in the configuration specified in Applicant's claims.

**A. Independent claim 16**

The Office Action fails to indicate how various features of Applicant's claimed subject matter are found in or otherwise obvious from the cited references and therefore fails to establish a *prima facie* case of unpatentability of the claimed subject matter. The Office is to provide sufficient information explaining how the claimed structure's components and their relationships to one another are disclosed by a cited reference.

The Office Action is silent with respect to (1) what constitutes a space frame in the Sick patent and (2) how Sick's solar radiation receiver 28 would be considered a spine member of a space frame.

The Office Action designates Sick's solar radiation receiver 28 as corresponding to the spine member of the claimed carrier and drive arrangement. However, the Office Action does not explain how a person of ordinary skill would view a solar radiation receiver 28 in Sick's solar mirror apparatus as being a spine member of a space frame and especially a spine member of a space frame that is part of a frame structure upon which a reflector element and platform sit, as specified by independent claim 16. It is also not apparent to Applicant how Sick's solar

radiation receiver 28 could be considered a spine member of a space frame to which a platform (such as a panel-like platform formed with stiffening elements in the form of corrugations or flutes upon crests of which a reflector panels sits) mounts, as specified by claim 16. Further clarification of the rejection and opportunity to address that rejection in response to a non-final Office Action are requested in the event the rejection is not withdrawn.

Likewise, the Office Action fails to explain how struts connect opposite end regions of a curved transverse frame member to a spine member of the space frame. Sick in view of Funger fails to disclose that a space frame has struts connecting opposite end regions of a curved transverse frame member to the space frame's spine member as specified in Applicant's independent claim 16. The Office Action states at p. 4 that "Sick ... discloses struts 32 connecting opposite ends of the curved transverse frame members 12 to the spine 28 via hoops 26". However, this statement excerpted from the Office Action does not accurately describe Sick.

Sick at 4:27-31 states "stiffening struts 32 [which] extend from the lower regions of the circular rings 26 to the central regions of the two clamping section supports 11 in order to provide an overall arrangement which is as stiff as possible against bending and twisting."

Sick does not disclose or suggest a structure in which struts are connecting opposite end regions of a curved transverse frame member as specified in Applicant's independent claim 16. As the text from Sick quoted above clearly states, Sick instead specifies that his stiffening struts connect to clamping section supports 11.

Further, Sick does not disclose struts which connect those opposite end regions of a curved transverse frame member to the spine member of a space-frame as specified in claim 16. Sick explains at 4:27-31 that Sick's stiffening struts connect to a lower region of Sick's circular ring.

The Office's assertions that components and relationships found in Applicant's claims are present in Sick appear to rely on an unduly broad interpretation of claim language as well as an unduly broad interpretation of the references. The Office construes claims under their broadest reasonable interpretation that a person of ordinary skill in the field would adopt, but the

Office in this instance has advanced a very broad interpretation that is inconsistent with the specification as well as the Patent and Trademark Office's standard for claim interpretation.

It appears, for instance, that an axle of a car would be "connecting" the car's tires to the car's roof under the Office's approach to rejecting the current claims if a reference disclosed a car in which e.g., a tire was mounted upon a wheel, the wheel connected to a spindle, the spindle to an axle, and the axle connected via springs to a car body that has a roof. The Office cannot ignore the ordinary meaning of words to a person of ordinary skill when construing claims and references, and it appears that the Office has done so in this case. Applicant therefore submits that the Office's construction of Applicant's claims as well as the cited references is impermissibly broad if Applicant has interpreted the Office's rejection and rationale correctly.

The Office Action has therefore not established a *prima facie* case of unpatentability of claim 16 and its dependent claims under 35 U.S.C. Sec. 103(a). The cited references also do not disclose all components of Applicant's claimed carrier and drive arrangement in the configuration specified in Applicant's claims. The rejections should therefore be withdrawn.

The Office Action at pp. 4-5 also states the following:

As regards the reflector and platform being separate/nonintegral, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated nonintegral components in the invention disclosed by Sick, since it has been held that where constituent parts are combined so as to constitute a unitary whole, the unitary whole is deemed integral. *In re Larson*, 144 USPQ 347. Accordingly, the reverse holds true as well.

Applicant believes this comment is moot in view of other comments made in the Office Action. Since the Office already indicated at pp. 3-4 of the Office Action that Sick discloses a separate "reflector" (per the Office, Sick's "mirror plates 15") and "platform" (per the Office, Sick's "clamping section supports 11"), it would appear that the point being made by the Office's assertion pertaining to separate or integral reflector and platform in the quoted text above is mooted by the Office's statements at pp. 3-4 earlier in the Office Action. If the Office sustains the rejection and intended to make a different point than the one expressed in the excerpt

above, Applicant would appreciate receiving further explanation in a non-final Office Action to provide Applicant sufficient opportunity to respond to the assertion.

The Office's detailed explanation of the basis for the rejections and the manner in which components of one reference would be substituted in the other is therefore requested if the rejections are maintained, since the Office Action fails to explain where in the cited references various features are present and especially since the cited references clearly fail to disclose various features of the claimed invention.

B. Dependent claims 19-22 rejected as obvious from Sick in view of Funger

Claim 19 specifies that the platform of the arrangement of claim 16 comprises a panel-like platform formed with stiffening elements in the form of corrugations and wherein the reflector element is supported upon crests of the corrugations.

Claim 20 specifies that the platform of the arrangement of claim 16 comprises a panel-like platform formed with stiffening elements in the form of flutes and wherein the reflector element is supported upon crests of the flutes.

Claim 21 specifies that the stiffening elements of the arrangement of claim 19 are orientated to extend in a direction parallel to the longitudinal axis of the reflector element, and claim 22 likewise specifies that the stiffening elements of the arrangement of claim 20 are orientated to extend in a direction parallel to the longitudinal axis of the reflector element.

The Office Action at p. 4 states the following with respect to where the features specified in Applicant's claims may be found in the cited references:

the platform comprises a panel-like platform (see at least [Sick] figs. 1-3) which is formed with stiffening elements 12,24 in the form of corrugations and wherein the reflector element is supported upon the crests of the corrugations, wherein the platform comprises a panel-like platform which is formed with stiffening elements in the form of flutes 12,24 and wherein the reflector element is supported upon the crests of the flutes, wherein the stiffening elements are orientated to extend in a direction parallel to the longitudinal axis of the reflector element (see at least figs. 1-3), wherein the

stiffening elements are oriented to extend in a direction parallel to the longitudinal axis of the reflector element (see at least figs. 1-3) ....

Aside from claims 19 and 20 being patentable for the reasons discussed above for claim 16, claims 19 and 20 are patentable because there is no structure apparent in Sick or in Funguer that corresponds to a panel-like platform with stiffening elements.

The Office asserts that “at least Figs. 1-3” of Sick show a panel-like platform having stiffening elements in the form of corrugations and flutes. Sick’s figures do not illustrate what the Office asserts they illustrate. Fig. 1 illustrates mirror surfaces 15 in Sick’s apparatus but no panel-like platform having stiffening elements. Fig. 2 and 3 are sectional and bottom views, respectively, of Sick’s apparatus. Neither of these figures illustrates or suggests a panel-like platform having corrugations or flutes. Instead, these figures show how individual pieces such as parabolic segments or webs 12 and connecting webs 24 form a lattice-type structure that lacks corrugations or flutes.

The Office apparently overlooks the ordinary meaning of a panel-like platform with corrugations such as that provided by Oxford English Dictionary, in which a corrugation is a “wrinkle, fold, furrow, or groove formed by the contraction of a soft surface or the indenting of a hard one,” for instance. Likewise, the Office fails to consider the ordinary meaning of a panel-like platform having flutes such as that provided by Oxford English Dictionary, in which a flute is “[a] similar groove or channel in any material” to a “channel or furrow in a pillar, resembling the half of a flute split longitudinally, with the concave side outwards,” for instance.

The Office Action also does not point out where crests of corrugations or flutes might be found. Sick’s Fig. 2 illustrates all web pieces, 12 and 24, as having the same height. Aside from there being nothing in Sick that corresponds to corrugations or flutes, there is nothing in Sick that corresponds to crests of corrugations or to crests of flutes.

Applicant respectfully requests that the rejection of claims 19-22 be withdrawn for these additional reasons.

C. Dependent claim 35 rejected as obvious from Sick in view of Funguer

Claim 35 recites that the support members of the claimed carrier and drive arrangement comprise a hold-down roller which prevents the lifting of the end members. The

Office Action has not explained where in the cited references this feature is found, and Applicant has likewise not been able to find this feature disclosed in either of the cited references. Further clarification of the rejection and opportunity to address that rejection in response to a non-final Office Action are requested in the event the rejection is not withdrawn.

All of the pending dependent claims rejected on the basis of Sick in view of Funger are also patentable for the reasons discussed above for claim 16, since that claim is incorporated by reference into each of the dependent claims.

2. Rejection of claims 17 and 18 as unpatentable over Sick in view of Funger and further in view of Butler (section 6 of the Office Action)

Applicant respectfully traverses the rejection of these claims. Butler does not provide the components and orientation lacking when Sick is considered in view of Funger, and therefore claims 17 and 18 are patentable for the reasons discussed above for claim 16.

Further, claim 18 claims a carrier and drive arrangement wherein a link chain extends around and is fixed to the end member to form a gear wheel. The Office Action states that Butler teaches a “solar collector drive arrangement including hoop element 18, with surrounding fixed chain 30 ....” This is inaccurate. Butler’s chain is not fixed – it is capable of movement from one of Butler’s drive rings to the next. Butler’s chain is certainly not fixed to the hoop-like member. Otherwise, Butler’s drive ring would not be capable of moving 360 degrees as recited at 1:67-2:1 of Butler’s patent. Claim 33 is therefore patentable over the cited references for this reason as well as for the reasons explained for claim 16.

3. Rejection of claim 24 as unpatentable over Sick in view of Funger (section 7 of the Office Action)

Claim 24 depends from claims 23 and 16 and is therefore patentable for the reasons discussed above for these claims. Further, claim 24 specifies that the radius of curvature of the platform to which the mirror attaches is in the range of 20 to 50 meters. The Office states its belief that “it would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated the claimed range into the invention taught by Sick in view of Funger, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable values or ranges involves only routine skill

in the art. *In re Aller*, 105 USPQ 233; *In re Swain*, 156 F.2d 239. See also *Peterson*, 315 F.3d at 1330, 65 USPQ2d at 1382 ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages.").

Sick in view of Funger does not render the selection of such a large radius of curvature obvious. If one tried to modify Sick to provide curvature to Sick's parabolic web (and therefore the reflector) to provide a focal length in the claimed range of 20-50 meters (approximately 65.6 – 164 feet), one would need to elevate the solar radiation receiver 28 of Sick's apparatus between approximately 65.6 feet and 164 feet above Sick's parabolic web. Sick's circular ring would therefore have to be approximately 40-100 meters in diameter (approximately 131 – 328 feet, as big as some of the world's larger Ferris wheels) to accommodate this radius of curvature in view of Sick's clamping section supports being secured at their ends, diametrically, to stiff circular rings 26 (*see Sick* 3:3-9). A person of ordinary skill would not find it obvious to provide the curvature specified in claim 24 to Sick's parabolic web and instead would avoid the radius of curvature specified in claim 24. The assertion that the selection of the specified radius of curvature is routine for a person of ordinary skill in the field is therefore an incorrect assumption on the Office's part, and the rejection should be withdrawn for this reason as well.

In view of the remarks above, Applicant respectfully requests withdrawal of the rejections and allowance of this application for issuance. Should any questions or issues arise, Applicant would appreciate a conversation with the Examiner in order to help avoid the Office having to send another non-final rejection as would be required under the current circumstances where Applicant has not amended the claims or otherwise introduced new issues for the Examiner's consideration and the Office Action has not established a *prima facie* case of unpatentability of the claims.

**CONCLUSION**

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

The Office is hereby authorized to charge any additional fees that may be required by this paper, or to credit any overages, to Deposit Account No. 50-3229.

Date: October 8, 2010

/Charles D. Holland/

Charles D. Holland  
Reg. No. 35,196  
Tel. No.: (650) 798-6710  
Fax No.: (650) 798-6701  
K&L Gates LLP  
630 Hansen Way  
Palo Alto, CA 94304

Customer No.: 76,082

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On October 8, 2010, I transmitted the documents named above by Electronic Filing System (EFS) of the United States Patent and Trademark Office of the addressee(s) as indicated above.

Date: October 8, 2010

Name: /Sherri Hale/ (Sherri Hale)